WHAT IS CLAIMED IS:

1.   An image sensing device comprising:

an image sensing element having a two-dimensional matrix of pixels;

first multiplier means for multiplying a row of an image sensed by said image sensing element by horizontal linear correction data;

second multiplier means for multiplying a column of the image by vertical linear correction data; and

change means for changing at least one of the horizontal and vertical linear correction data in accordance with a position of a pixel of interest in the image,

wherein said first and second multiplier means correct a value of each pixel of the image.

2.   The device according to claim 1, wherein the image is segmented into a plurality of partial areas, and said change means changes at least one of the horizontal and vertical linear correction data in accordance with the partial area to which the pixel of interest belongs.

3.   The device according to claim 1, wherein the image is segmented into a plurality of partial areas, and said change means changes both the horizontal and vertical linear correction data in accordance with the partial area to which the pixel of interest belongs.

4. The device according to claim 1, wherein said change means has two different types of horizontal linear correction data, alternately switches the horizontal linear correction data in units of rows, and supplies the selected data to multiplication by said first multiplier means.

5. The device according to claim 4, wherein said change means has two different types of vertical linear correction data, alternately switches the vertical linear correction data in units of columns, and supplies the selected data to multiplication by said second multiplier means.

6. The device according to claim 5, wherein said image sensing element includes color filters in a Bayer matrix.

7. The device according to claim 1, wherein the image is segmented into a plurality of groups each of which is defined by an area as a two-dimensional matrix of a plurality of pixels,

said device further comprises third multiplier means for multiplying each group by two-dimensional correction data given by a row and column, and said change means includes means for changing the two-dimensional correction data in accordance with the group to which the pixel of interest in the image belongs.

8. The device according to claim 1, wherein said change means includes means for changing at least one of the horizontal and vertical linear correction data in accordance with a state of a photographing optical

5 system.

9. The device according to claim 1, wherein said change means includes means for changing at least one of the horizontal and vertical linear correction data in accordance with one of a focal length, field angle,

10 and aperture of a photographing optical system or a combination thereof.

10. An image processing apparatus for processing an image supplied from an image sensing element having a two-dimensional matrix of pixels, comprising:

15 first multiplier means for multiplying a row of an image sensed by said image sensing element by horizontal linear correction data;

second multiplier means for multiplying a column of the image by vertical linear correction data; and

20 change means for changing at least one of the horizontal and vertical linear correction data in accordance with a position of a pixel of interest in the image,

wherein said first and second multiplier means

25 correct a value of each pixel of the image.

11. An image processing method comprising:

the first multiplier step of multiplying a row of
an image sensed by an image sensing element having a
two-dimensional matrix of pixels by horizontal linear
correction data;

5   the second multiplier step of multiplying a
column of the image by vertical linear correction data;
and

the change step of changing at least one of the
horizontal and vertical linear correction data in
10   accordance with a position of a pixel of interest in
the image,

wherein a value of each pixel of the image is
corrected in the first and second multiplier steps.

12.   A memory medium storing an image processing
15   program, said program including:

the first multiplier step of multiplying a row of
an image sensed by an image sensing element having a
two-dimensional matrix of pixels by horizontal linear
correction data;

20.   the second multiplier step of multiplying a
column of the image by vertical linear correction data;
and

the change step of changing at least one of the
horizontal and vertical linear correction data in
25   accordance with a position of a pixel of interest in
the image,

wherein a value of each pixel of the image is corrected in the first and second multiplier steps.